

What Is Claimed Is:

1. A method of communication device initiated frame exchange every service interval comprising:
 - 5 transmitting a polling message to an access point at least once per service interval, the polling message requesting a downlink traffic frame; and
 - determining whether a valid downlink frame is received from the access point.
- 10 2. The method of claim 1 wherein when a valid downlink frame is received, the method comprises transmitting an acknowledgement to the access point.
3. The method of claim 2 comprising:
 - 15 before transmitting the polling message, activating a transceiver of the communication device; and
 - after transmitting an acknowledgement, deactivating the transceiver.
4. The method of claim 1 wherein when a valid downlink frame is not received, the method comprises:
 - 20 determining whether it is time to transmit another polling message; and
 - deactivating the transceiver when it is not time to transmit another polling message.
- 25 5. The method of claim 1 wherein the step of transmitting a polling message to the access point comprises transmitting a polling message along with uplink traffic.
- 30 6. The method of claim 5 wherein when a valid downlink frame is not received, the method comprises retransmitting the uplink traffic and a polling message.

7. The method of claim 5 wherein when a valid downlink frame is received, the method comprises:

determining whether the frame contains traffic;

5 when the frame contains traffic,

transmitting an acknowledgement of receipt of the traffic
to the AP; and

deactivating a transceiver of the communication device;

and

10 when the frame does not contain traffic, deactivating a transceiver of
the communication device.

8. A method of communication device initiated frame exchange comprising:

- 5 activating a transceiver of the communication device;
- initiating transmission of an uplink traffic frame to an access point;
- determining whether a valid response frame is received; and
- when a valid response frame is received, deactivating the transceiver.

10 9. The method of claim 8 wherein when a valid response frame is not received, the method comprises retransmitting the uplink traffic frame to the access point.

10. A method of communication device initiated frame exchange comprising:

receiving a polling message from a communication device, the polling
5 message requesting transmission of a downlink traffic frame; and
responding to the polling message by transmitting a downlink traffic
frame to the communication device.

11. The method of claim 10 wherein the step of receiving a polling
10 message from a communication device comprises receiving a polling
message and uplink traffic from the communication device.

12. The method of claim 11 further comprising transmitting an
acknowledgment of receipt of the uplink traffic to the communication device.

13. The method of claim 10 further comprising:
waiting for an acknowledgement of receipt of the downlink traffic
frame from the communication device;
15 when the acknowledgement is not received, buffering the downlink
20 traffic frame for retransmission to the communication device.